



# PC Builder

If you're bored of your beige computer case, there is a cheap and cheerful alternative to buying a new one. Josh Blodwell shows you how to give your existing PC case a classy new look with just a few cans of paint



## HACKERS CRACK INTEL MAC OS X

Apple's new version of OS X for Intel-based Macs has been cracked to run on virtually any PC. The new operating system was released on test Apple systems only recently but has already been unlocked and spread around the internet. It's currently one of the most popular downloads on file-sharing sites.

The hackers' breakthrough was cracking the development kit, allowing them to run the software on any PC. Some hackers have managed to install OS X on a virtual machine running on Windows, but this sacrifices a lot of power to the emulation process. Others have run OS X on home PCs by building a system based on the same chipset as the original Intel-based Apple Mac. Given the correct 945 chipset and processor, it's possible to create a compatible file system using a Linux installer and install the OS X system on that. The results of these hacks are impressive. However, they've also allowed people to make high-specification, illegal Macintosh machines for a fraction of the retail price of an equivalent Apple product.

If you want an individual PC, there's one simple, inexpensive and incredibly effective way to get it: respray your case. Getting an effective finish is pretty straightforward, provided you follow the instructions outlined in this month's *PC Builder*. If you take your time and follow these steps carefully, you should be able to get a car-quality finish on your case, all for the price of a few cans of paint and some sandpaper.

Before you start, make sure you have the right materials for the job. Our 'What you need' box on the opposite page lists everything you need to give your PC case a makeover. Once you have collected these items, you're ready to begin.

**1** First you need to dismantle your case so that you can work on each of its panels individually. You don't want to be painting or preparing metal that is still attached to your chassis. If you have a reasonably modern case, you should be able to remove all the sides, including the plastic front. Pop off the fascias for the optical drives by pressing down on their retaining tabs; you'll need to remove the front of the tray before the front of the drive. Once you have separated all the panels, you can work on them in a production line fashion, preparing one panel while the paint or primer dries on the others.

Create a clean surface on which to lay your primer. For metal panels, this means sanding down the original coat of paint to its layer of primer, but not down to the bare metal. You'll want to keep the original protective layer, as it provides a

strong base for painting. When the paint cures and hardens properly, which takes about a month, your case will have a strong finish that can't be chipped or scratched easily.

When you're ready to sand the case, put the highest-grit sandpaper on your sanding block. Sand vigorously with dry paper until you have a nice smooth finish. You will need to sand many parts of your case freehand without a block, which is tiresome but necessary; you can't leave any areas unsanded if you want the paint to stick and the finish to last.

Next you must scrub any plastic panels with hot water and detergent. The process used to mould these parts leaves an oily coating, which makes your paint pool and prevents it sticking properly. You can sand plastic lightly to improve the adhesion of the primer; the paint will fill in the tiny scratches giving you a perfect finish.

Once you've finished sanding, clean the surfaces with a rag or, better still, a tack cloth – a special type of waxy cloth for cleaning fine dust from surfaces before you paint them.

**2** When you have prepared your surface, you need to apply primer to get a deep colour and lasting finish. Find a well-ventilated area that is free from dust, insects and animals. Apply an even coat over each section you will be painting. Leave it to dry for at least 30 minutes before you apply the second coat.

The best spraying technique is to hold the can about 20cm away from the surface and spray in





long flowing lines, starting at the edge nearest to you and working out. Be careful not to create pools at the start and end of each swing of the can. If you think the coat is too thin or patchy, move round and crosshatch the paint you've already applied.

**3** When the primer has dried hard, give it another quick pass with 800-grit sandpaper and apply a second coat of primer. You may find that you end up sanding down to the bare metal in some places, such as the edges or handles. If you do, don't worry: just give the panel another quick spray with the primer and try again. Repeat this with every section you're going to paint until everything is ready to receive its first coat. This way, you won't forget how many layers of top coat you've applied.

**4** Next you need to apply a thick layer of paint. This is the only tricky part of the process. If the layer is too thick, the paint will pool, drip and take far too long to dry, and it may be soft when you come to sand it. If it is too thin, you will have a blotchy surface that peels easily and requires a lot of sanding later. You probably won't get it right first time, but make sure you're prepared for the consequences. If any paint has pooled, leave extra drying time before sanding.

The paint can take a long time to be dry enough for sanding. Ignore what it says on the back of the can. Leave the paint to harden for as long as you can bear; overnight should be long enough. If you try to sand soft paint, the finish will tear and you'll have a lot of extra work on your hands.

When the paint has hardened properly, you can start sanding it. Use a lot of soapy water with your 800-grit paper and sand the paint gently. Apply too much pressure with the coarse papers, and you'll go through to bare metal in no time. Also, be careful not to sand any raised edges with the block; do these by hand later.

Continue this process of applying layers of paint and sanding them flat until you reach your final coat. By now, you should have at least three coats of colour and two coats of primer, which will give you a deep colour without any blotches.

If you just want to give your case a fresh lick of paint, this is a good place to stop. If, however, you are after a special finish, read on.

**5** A perfect finish takes a lot of extra work. You're going to have to sand with progressively finer paper, without cutting through the layers of paint to the primer and bare metal below. This completely removes any orange-peel effect and prepares the surface to be polished smooth with T-Cut.

Start sanding lightly with a finer grade (800 and above) of paper, using lots of soap and water and taking care not to sand your way down to the primer. Change the direction of sanding regularly too, so you crosshatch your previous strokes. You'll see where the paint is still rough by the way the water dries. If you still get dimpling on the panel, be careful not to cut through the paint.

When you finally get a smooth surface, move to a higher grade of paper and use the same technique again. Keep working until you've gone through all the levels of sandpaper you could get your hands on. You should end up with an immaculate, smooth surface. Of course, it will also be a little dusty; just clean away the paint dust with a tack cloth ready for finishing with T-Cut.

**6** T-Cut requires two cloths: one to apply it and another to remove it. Apply it thickly, rubbing it in with large swirls, and rub it off with the other cloth as quickly as you can. Make sure you use large sweeping motions; it takes ages to remove all the compound from the paint, so don't give up too soon. Two sessions with the T-Cut should be sufficient – you don't want to wear your way through the coat.

### WHAT YOU NEED

- Primer: one can should be sufficient for two coats
- Automotive or spray paint: up to four cans needed for three or four coats
- Sandpaper: three or four sheets of each grade of wet and dry paper; between 600-grit to as close to 2,000-grit as your local Halfords stocks
- A sanding block
- A bag of tack cloths
- Rubbing compound: T-Cut or similar
- A bag of new soft cloths for finishing
- Sealing material: car wax or automotive lacquer

Then just keep buffing the panels until you are happy with the finish.

Finally, apply your car wax. Follow the instructions on the back of the bottle, or try the wax-on wax-off method perfected by Mr Miyagi in *The Karate Kid*. The more you buff the better it gets, but two or three coats should be fine.

When you're satisfied with the finish, you can admire your handiwork. The paint can take a couple of months to harden fully, so take care not to place objects on your case, and keep it away from radiators, or you may spoil all your hard work. **CS**

## NEXT MONTH

### MINI ITX SYSTEMS

How to build tiny PCs using Mini ITX motherboards

## THE RIGHT KEYBOARD FOR YOUR CUSTOM PC

### REVIEW KEYBOARD

#### REVOLTEC Lightboard PS2

RATING ★★

PRICE £24 inc VAT

SUPPLIER [www.yoyotech.co.uk](http://www.yoyotech.co.uk)

The Revoltec lightboard is a full-size, blue illuminated keyboard. Rather than a standard UK keyboard, it's a US-style, 107-key unit. This means the @ and " keys are reversed, so you need to set it up to use US layout in Windows. Some of the keys are unusual sizes, such as the half-size Del key, but most are full size, and they have a reasonable throw length. You can turn the illumination on and off with the press of a button. It feels cheap, but then for an illuminated keyboard it is cheap.



### REVIEW KEYBOARD

#### SAITEK Eclipse

RATING ★★★★★

PRICE £33 inc VAT

SUPPLIER [www.cclonline.com](http://www.cclonline.com)

Like the Lightboard, Saitek's Eclipse is a blue backlit keyboard, but there are significant differences between them. The Eclipse is a full-size UK-layout keyboard, so you don't need to change your Windows setup to avoid typos. It's also better quality, which means typing is quieter and the backlighting more elegant. The keys are opaque, and light passes through only the letters on the keys. The Eclipse's lighting on/off button also allows you to choose dim or full illumination mode.



### REVIEW KEYBOARD

#### APPLE PRO

RATING ★★★★★

PRICE £38 inc VAT

SUPPLIER [www.ebuyer.com](http://www.ebuyer.com)

Although it's designed for a Mac, Apple's top-of-the-range PRO keyboard has great driver support for Windows XP. This high-quality keyboard manages to have the largest key layout of all the keyboards on test, while taking up the least desk space. It has some major disadvantages, though. Because it's an Apple Mac keyboard the " and @ keys are reversed, and it doesn't have a Print Screen key. What's more, there is no Windows key; the Apple key takes its place.

